

Essex Mill  
Mill and Van Houten Streets  
Paterson, New Jersey  
Passaic County

HAER No. NJ-6

HAER  
NJ,  
16-PAT  
11-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

Historic American Engineering Record  
National Park Service  
Department of the Interior  
Washington, D.C. 20240

HISTORIC AMERICAN ENGINEERING RECORD

ESSEX MILL  
NJ-6

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NJ,  
16-PAT  
11-

Date: 1850-1859, 1870-1879

Location: Mill and Van Houten Streets  
Paterson, New Jersey

Designed by: Unknown

Owner: William Wishnack & Sons.

Significance: Occupying the site that was first to be leased from the Society for the Establishment of Useful Manufactures, the Essex Mill buildings contain elements that can be traced back to 1804. The first structure on the site was the "Old Yellow Mill," a two story, sandstone building approximately 60' by 90', notable for the fact that its first tenant, Charles Kinsey, conducted one of the earliest attempts to manufacture paper using a continuous sheet process. The building was demolished at mid-century though the foundations were used in the construction of the existing back building, a three story structure, largely of brick, that was erected probably in 1856.

The two major wings of the Essex Mill date from the early 1870s, when Robert and Henry Adams purchased the site from the Passaic Manufacturing Company and enlarged and modernized it. The mill, with a total area of almost 90,000 square feet, was used for the production of mosquito netting.

As in the case of many of the mills in the Historic District of Paterson, the Essex Mill has been occupied by numerous businesses and used for a variety of purposes over the years. As late as 1969 there was an operating silk weaving operation in the mill that used machinery from the 1920s. The machinery, power shafts, belt drive and pulley system were in place at the time of the survey.

Transmitted By: Monica E. Hawley, Historian, 1983

THE ESSEX MILL LOT

The following is the result of a deed search done at the time of the survey:

"Beginning on the west side of the Canal on Mill Street at a stone monument standing next to the northeast corner of the stone warehouse formerly the property of Daniel Holsman (which stone monument is at the distance of 65 feet in a southeasterly direction from the southeast corner of the mill now erected on said mill lot) thence running westerly along the line of the mill lot now or lately the property of said Daniel Holsman 150 feet to the face of the wall of the embankment of the then upper canal thence northerly along the face of said wall in a parallel line with Mill Street 140 feet thence easterly parallel to the first mentioned course 150 feet to the said canal in Mill Street and thence southerly along the line of said canal 140 feet to the place of beginning."

### ESSEX MILL

The Essex Mill is historic as the first new mill site leased by the Society for Establishing Useful Manufactures, and as the scene of some of the earliest experiments with continuous paper manufacture in the United States.

The failure of the SUM's own factory operations left the governors with the problem of how best to utilize their property--mills, canals and water rights to the Passaic River. The first step after 1796 was to lease out the Society's existing cotton mill to some of their former employees such as John Parke and John Clarke, Senior.

On November 1, 1801 the governors of the SUM began the second stage of their policy, which was to lease out new mill lots and a certain quantity of water rights to others for development. The purpose of this strategy was to allow the impoverished SUM to improve its properties without putting up any cash, and yet still realize income while maintaining ultimate ownership of the property. This first lease was characteristic of most of the later leases from the SUM in that it gave the tenant a mill lot with the right to draw water from a canal constructed and owned by the SUM. The tenant paid a yearly rental fee, and could renew the lease at the expiration of the 21 year term indefinitely for the same consideration.

The first lease issued on November 1, 1801 was to Charles Kinsey and Israel Crane for a paper mill on the site of the present Essex Mill lot. The lease gave Kinsey and Crane the right to draw fifteen inches square (225 sq. in.) of water from the middle canal in back of their property for a period of twenty-one years, renewable, at the yearly rate of \$75.<sup>1</sup>

Kinsey and Crane began construction of the Essex Mill building, which, according to available sources, was not completed until 1804.<sup>2</sup> In designing the paper mill, Charles Kinsey, whether from previous knowledge of the Fourdriner technique or his own ideas, attempted to make the process continuous using rollers and cylinders. He applied for a patent on this process in 1807, and succeeded in marking paper in a continuous sheet during 1809.<sup>3</sup> Like most inventors, however, Kinsey experienced severe financial difficulties in bringing the idea to fruition. By 1805 it seems likely that Kinsey had already over-extended his personal capital, since in that year he assigned all his interest in the lease of the mill and water-rights from the SUM to his partner, Crane, and a new backer, Thomas Fairchild.<sup>4</sup> From what is known it seems likely that Fairchild's primary or only role was to furnish the capital necessary to continue experiments with the paper processing machinery.

Difficulties in bringing the paper mill into operation rapidly led Kinsey's partners to look for other means of realizing something on their investment. With the Embargo of 1807, the future for domestic cotton manufacturers looked bright, and on July 1, 1808 the SUM granted the right to use the upper floors of the paper mill for the manufacture of cotton and to increase the supply of water.<sup>5</sup> Kinsey was not entirely successful in the paper mill, even after 1809, probably due to the normal difficulties of establishing a completely new process of manufacturing. There were problems due both to the availability of materials and the fact that the partners were probably less and less willing to plow further capital into what seemed a losing venture compared with the relatively established

cotton technology.<sup>6</sup> Thus Kinsey was denied the capital to make his paper process successful, and the credit for making continuous paper manufacture profitable must fall elsewhere. The Essex Mill was thus the site of one of the earliest, if ultimately unsuccessful, pioneering ventures in the continuous paper factory process. The War of 1812 led to a further fillip to the textile industry, and the partners requested and received from the SUM, the right to extend the manufacturing of cotton, wool, hemp and linen throughout the mill.<sup>7</sup>

Financial problems continued, despite the attempt to make the mill more profitable by concentrating on textiles as opposed to paper. The need for further capital continued and on June 1, 1814 the partners assigned all their rights in the SUM Lease to Ann Plume, who apparently loaned them more than \$20,000 between then and 1815.<sup>8</sup>

In May 1818, executors of Plume's estate foreclosed the Essex Manufacturing Company. They sold the leasehold to James Casey in 1819 for \$9,500, and he four years later, sold it to Thaddeus Wakeman of New York City for \$29,000. Twenty-three years after the SUM had issued the original lease (all SUM leases were of a 21 year duration) in July of 1825, they leased the property to John Colt with a provision for 15 sq. inches of water.<sup>7</sup> Colt continued running the mill as a cotton factory. In Fisher's Census of Paterson of 1827, the enterprise is listed as having a total capitalization of \$34,000 and using 2100 spindles to annually change 175,000 lbs. of cotton into 150,500 lbs. of yarn. The factory employed eight men, seven women, and fifty-five children, who received a combined annual wage of \$6,750. In 1828, Colt leased an additional one square foot of water from the SUM.

That same year, Colt organized the Paterson Manufacturing Co., becoming its first president and majority stock holder.

According to the 7th Census of New Jersey, Passaic County, 1850, the Paterson Manufacturing Co., fabricated cotton duck and sheeting. Utilizing 1,126,475 lbs. of cotton and 160 tons of coal, the seventy-two male employees and 208 female employees wove 1,022,000 yards of cotton sheeting with a value of \$196,200. The total capitalization of the firm was set at \$194,000. Either the company contracted or figures were miscalculated, for in the Scientific American of 1859, there is the following commentary:

"In 1856 it was enlarged by its proprietor John Colt, and now contains 4,000 spindles, consuming 10,500 lbs. of cotton every week (about 525,000 lbs. annually) and employing 90 operatives."

It is probable that the first figures are for both the Passaic Mill #2 and Essex Mills of the Paterson Manufacturing Co. John Colt resigned the presidency of the firm in 1857, and William Ridgeway ascended to the position.<sup>9</sup> By 1859, E. Boudinot Colt, John Colt's son, had purchased the company's stock, and reorganized it into the Passaic Manufacturing Co. with the younger Colt serving as president.<sup>10</sup> At this same time, the Essex Mill was installing its first steam power, and the Paterson firm of T.C. Simonton and Co. were engaged to construct a Blanchard boiler with patent cut-off, furnishing steam to the engine to drive the plant's machinery.<sup>11</sup> Nonetheless, in August of 1860, the company contracted for an additional 144 square inches of water contingent upon the availability of 31 square feet already having been supplied to the other leases on the middle race by the SUM.<sup>12</sup>

The mill employed breast and turbine wheels rated at 120 combined horsepower as its main source of energy to produce, primarily, cotton yarn. Ten years later, in the Census of 1870, the company was calculated to have 5808 spindles, producing 432,096 lbs. of yarn. The Passaic Manufacturing Co. was dissolved in 1869, and the Essex Mill sold in 1870 for \$47,000 to Robert and Henry Adams.<sup>13</sup>

By 1881, the Adams Firm employed 280 in the Essex Mill, making mosquito netting.<sup>14</sup> The main building of the Essex Mill had 40,500 square feet, its extensions, 37,800 square feet, and connections, 11,260 sq. feet. Water supplied 370 horsepower, and steam 350 horsepower<sup>15</sup> to drive 17,000 spindles. The following year, after going bankrupt Adams sold the Essex Mill to Essex Mills Inc., for \$325,000.<sup>16</sup>

That company sold the leasehold to the Paterson Cotton Mills in 1897, who sold it to George F. Baker, president of the First National Bank of New York, in 1898.<sup>17</sup> He sold it to the New Jersey General Security Co., of which he was a director.<sup>18</sup> The Mill leasehold returned to the hands of the SUM in a sale dated 1930.<sup>19</sup>

Seemingly, George Baker also bought the mill building outright in 1898 from the estate of Morgan Colt. After that date, the lease and the ownership were consolidated until 1919 when New Jersey General Security sold the property to William Wishnack, whose sons operated the mill and now lease it to others for cotton yarn/winding and storage. Until 1969 there was an operative silk weaving establishment on the fourth floor, using machinery from the 1920s era. The machinery, shafting and belting are still in place.

## ESSEX MILL BUILDING HISTORY

The Essex Mill lot is located fronting on Mill Street, bounded on the north by the spillway and on the west by the canal from the middle race to the start of the lower race. The Lot was first leased on November, 1801 to Charles Kinsey and Israel Crane for a paper mill. The building was begun sometime after 1801 and is stated to have been finished in 1804. This first building appears on construction was probably of local sandstone, two stories high, on the present construction was probably the local sandstone, two stories high, on the present site of the westernmost building of the Essex complex. The Southeastern corner of the present building's first story is still in sandstone, and this is almost certainly a remainder of the first building of 1804, since its physical location coincides with a description of the corner location in a deed of 1816. The building is shown on the maps as roughly 60 feet by 90 feet, about sixty-five feet back from the tail race along Mill Street.

The present shape of the back (west) building, a three story structure built predominantly of brick, may be explained by two factors, first the continuing problem of fire which probably destroyed the original mill at some date, and second the enlargement of the mill by John Colt in 1856.

Water power for the Essex Mill, in later years, came from a cast iron trunk connected to the middle raceway and to the breast and turbine wheels, both located in southwest corner of the rear building. The water then flowed either along the back of the mill building north to the connection with the spillway from the middle canal, or diagonally north-east to the tail race along Mill Street. In the early years power was probably primarily generated by an overshot wheel, but by 1870 the firm had both breast and turbine wheels, and the cast-iron tank probably dates from this period. Additional circular brick courses in the back of the mill building show that the size of the penstock entering the mill was either altered in size or was re-aligned to suit a later turbine. By 1860 the firm was also supplementing its water power with a steam engine, and the chimney now standing may date from that period.

The modern form of the Essex Mill dates from 1870, when the Passaic Manufacturing Company sold the mill to Robert and Henry Adams. Adams added the present two major wings to the building, joining the northern most wing to the existing back building. Construction took place during 1871 and 1872, as indicated by a plate on the east face of the north-east building.

## Footnotes for the Essex Mill

1. Lewis, Randall B., "Water Rights of the Essex Mill", May 23, 1946., p. 2.
2. Essex County Deeds, C. 400-401.
3. "Manufactures of Paterson", Sci. Am., 1859, p. 330. Also, Dickerson, Philomen, "City of Paterson, Its Past, Its Present and Its Future", Reprinted by the Passaic County Hist. Soc., 1968.
4. Trumbull, p. 43.
5. Essex Deeds, C400, C p. 337.
6. Essex Deeds, C p. 466-67, F . 350.
7. Essex Deeds, I p. 11.
8. Essex Deeds, I p. 13.
9. Trumbull, p. 59.
10. Ibid., p. 59.
11. Sci. Am. p. 299.
12. Essex Deeds, I p. 19.
13. Passaic Deeds, I-4, p. 415.
14. Trumbull, p. 209-10.
15. Ibid. p. 211.
16. Passaic Deeds. C-7, p. 506.
17. Passaic Deeds. A-13, p. 299, G-13, p. 620.
18. Passaic Deeds. V-15, p. 44.
19. Passaic Deeds. O-27, p. 205.